Terminal Business Service (ATB): Background and Update

Marcos Costilla, ATB-2
Briefing to the AF and AT
Management Teams
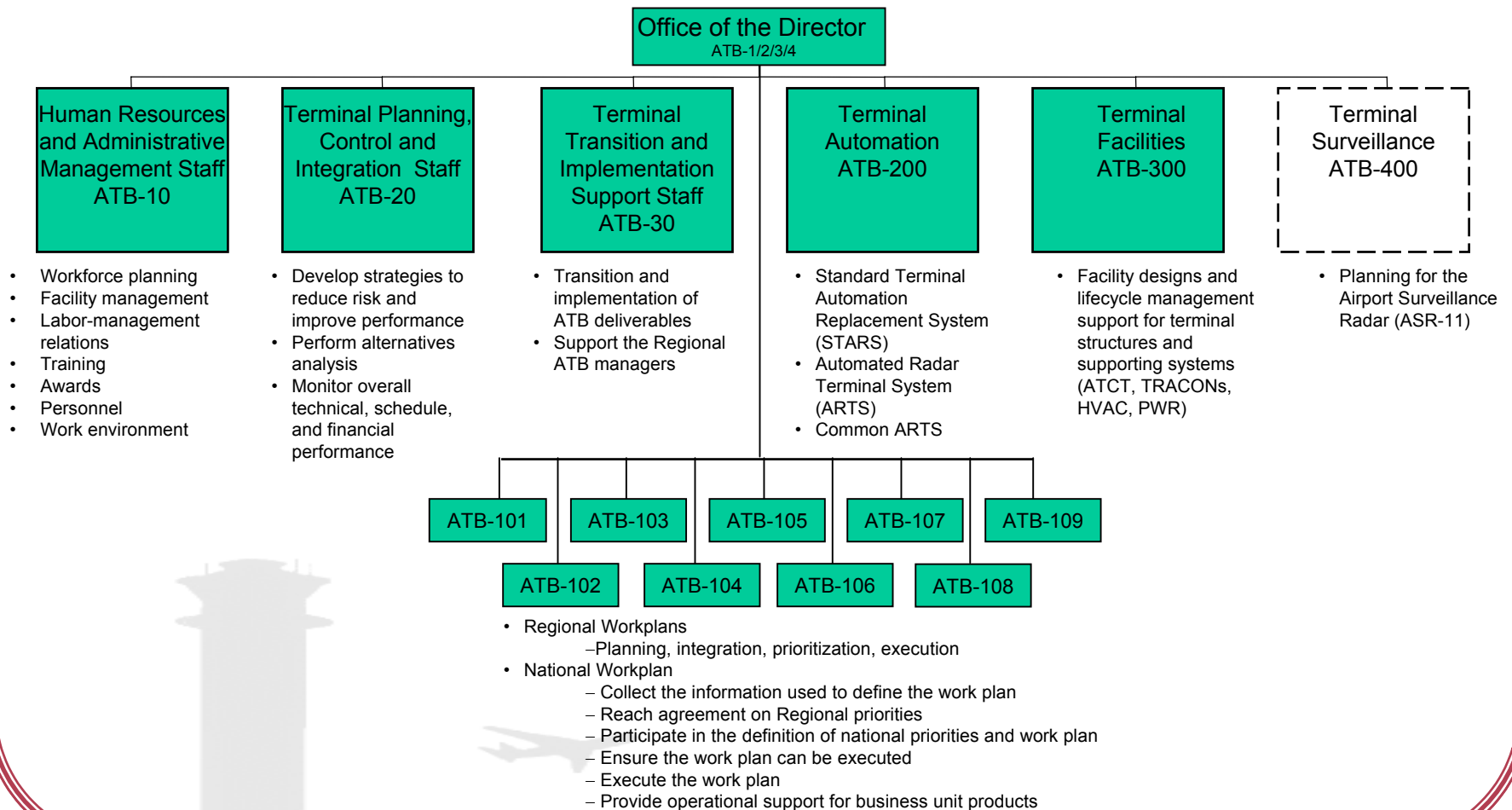February 2002

Scope of ATB

- Initial scope
  - Integrated planning for automation, facilities, and surveillance
  - Execution of terminal automation (ARTS/STARS) and facilities programs (tower/TRACONs)
  - From requirements to second-level maintenance
- Personnel - 300+
- Total integrated budget of close to $1B
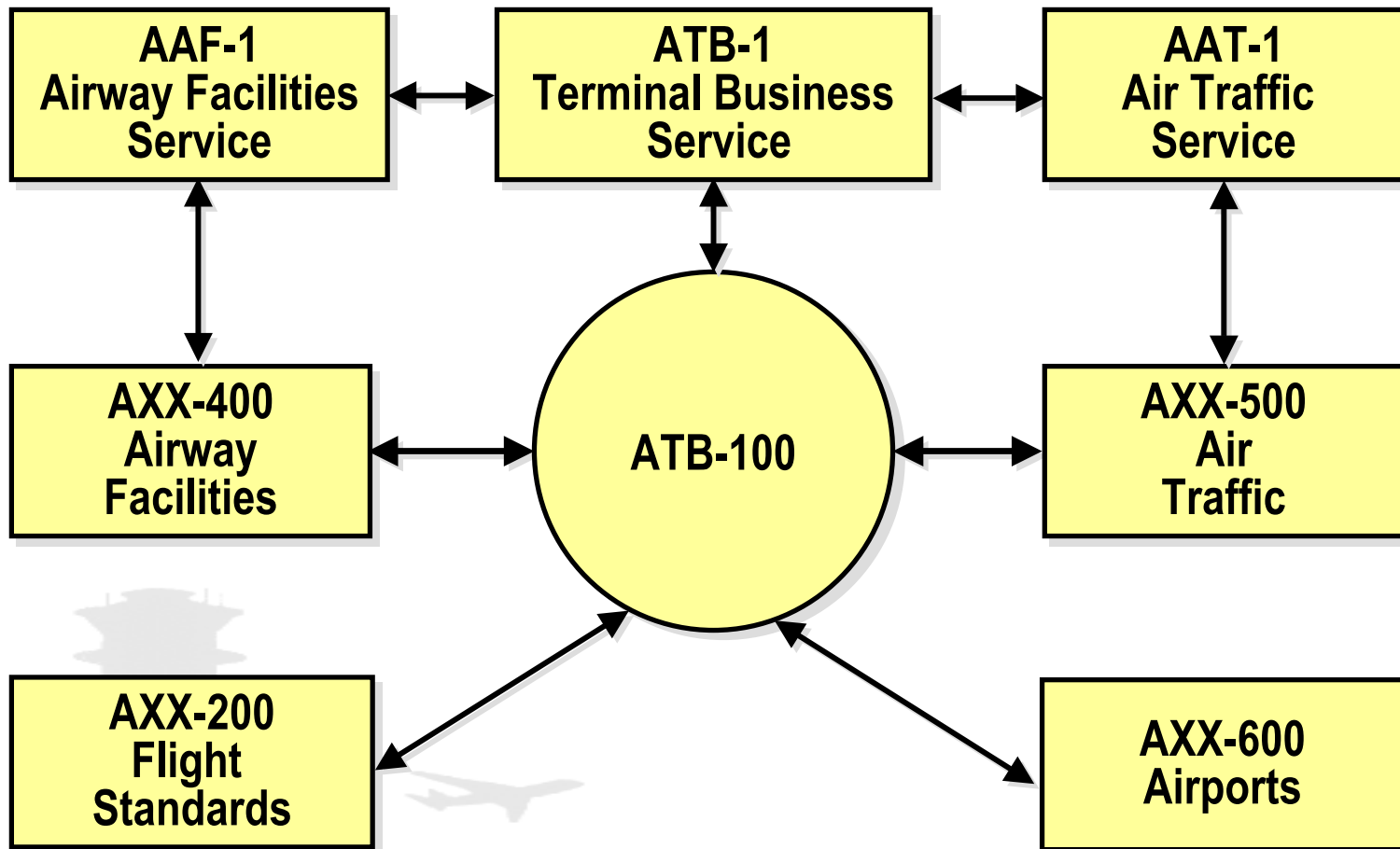 - Combines F&E & Ops

ATB in the Future

- Expect to add terminal surveillance products, e.g., ASR-11, weather products, and surface movement systems to the ATB organization

ATB Functions

Office of the Director
ATB-1/2/3/4

Human Resources and Administrative Management Staff
ATB-10

- Workforce planning
- Facility management
- Labor-management relations
- Training
- Awards
- Personnel
- Work environment

Terminal Planning, Control and Integration Staff
ATB-20

- Develop strategies to reduce risk and improve performance
- Perform alternatives analysis
- Monitor overall technical, schedule, and financial performance

Terminal Transition and Implementation Support Staff
ATB-30

- Transition and implementation of ATB deliverables
- Support the Regional ATB managers

Terminal Automation
ATB-200

- Standard Terminal Automation Replacement System (STARS)
- Automated Radar Terminal System (ARTS)
- Common ARTS

Terminal Facilities
ATB-300

- Facility designs and lifecycle management support for terminal structures and supporting systems (ATCT, TRACONs, HVAC, PWR)

Terminal Surveillance
ATB-400

- Planning for the Airport Surveillance Radar (ASR-11)

ATB-101 ATB-103 ATB-105 ATB-107 ATB-109

ATB-102 ATB-104 ATB-106 ATB-108

- Regional Workplans
  - Planning, integration, prioritization, execution
- National Workplan
  - Collect the information used to define the work plan
  - Reach agreement on Regional priorities
  - Participate in the definition of national priorities and work plan
  - Ensure the work plan can be executed
  - Execute the work plan
  - Provide operational support for business unit products

Key Stakeholders

AAF-1 Airway Facilities Service	ATB-1 Terminal Business Service	AAT-1 Air Traffic Service

AXX-400 Airway Facilities	ATB-100	AXX-500 Air Traffic

AXX-200 Flight Standards		AXX-600 Airports

ITWP Programs

- ATB programs
  - STARS – Interim Tower Display
  - ARTS IIIE – ASR-11
  - ARTS Color Display (ACD) – Terminal facilities

- Programs outside ATB
  - Navigation and Landing
    - ILS, New Qualifiers, Replace VASI w/PAPI, RVR/DME/NDB, LAAS
  - Communications
    - RCE, ETVS, CFE Expanded, Radio Replace, RCOM, FAA Telecom Infrastructure
  - Surveillance
    - ASDE SLEP, AMASS, Mode S, ATCBI, ASR-9, ASDE-X
  - Weather
    - ITWS, TDWR, Upgrade LLWAS to Expanded Network, ASR-Weather, System Process (ASR-WSP)

Significant Accomplishments

- FAA Early Display Configuration (EDC)
    - EDC-2 In Service Decision approval in 07/01
        - Deployment to eleven sites underway
    - Memphis is 1st post key site facility
        - CAI completed on 11/01. IOC on track for 04/02.
- DoD STARS System
    - McGuire Air Force Base IOC in 9/01
    - Norfolk VA Naval Air Station (1st Navy) IOC scheduled for 03/02
- FAA Full STARS- 1
    - FS-1 OT&E Phase 1 completed in 12/01. Phase 2 completes on 02/02.
    - FS-1 initial operations at El Paso key site on track for 4/01
- FAA Full STARS- 2/2+
    - FS-2/2+ SAT Phase 2 completed on January 11-- 98% pass rate
    - On track for IOC at new Philadelphia TRACON on 11/02

Significant Accomplishments (Continued)

- Common ARTS
  - MSP commissioned as an ARTS IIIE site: 10/01
  - Atlanta (A80) Phase 2 key site test completed: 01/02
    - Introduces Remote ARTS Color Display (R-ACD) capability at 4 remote towers
    - Introduces new automated extended diagnostics capabilities
  - NCT Phase 1 end-to-end test completed: 01/02
    - Tested TRACON connectivity with 18 remote towers
  - PCT and NCT Power PC hardware installation completed: 12/01
    - Provides higher capacity ARTS IIIE backroom processor cards and components
- Stand Alone Tower Display System (SATDS)
  - Demonstration systems installed in two operational towers
    - STARS Lite at Vero Beach, FL, and ARTS-1E at Prescott, AZ
  - Both systems have interim certifications
  - Demo and Human Factors evaluations completion on 03/02
  - Quick look report 15 days after demo and final report 45 days after demo

EDC-2 IOC Dates *

- Memphis   MEM   4/02
- Bradley   BHM   5/02
- Birmingham   Y90   5/02
- Detroit   BHM   6/02
- Albany   ALB   7/02
- Albuquerque   ABQ   8/02
- Providence   PVD   9/02
- Las Vegas   L30   10/02
- Omaha   R90   12/02
- Des Moines   DSM   1/03
- Cleveland   CLE   2/03

FY03 FS-2+ Production Delivery Sites

- **Portland**
- **Boston**
- **Miami**
- **San Antonio**
- **Milwaukee**
- **Raleigh-Durham**
- **Kansas City**
- **Seattle/Tacoma**
- **Tucson**

- **Rochester**
- **Nashville**
- **Oklahoma City**
- **Dayton**
- **Roswell**
- **Moses Lake**
- **Charlotte**
- **Buffalo**
- **Tulsa**

A look at some of the equipment on display inside the van.

Jane Garvey offers welcoming remarks at the van's Washington, DC, kickoff. Tower display visible at left, at rear of van.

STARSVAN brings displays to controllers and maintainers nationwide. Coming soon to a tower/TRACON near you!
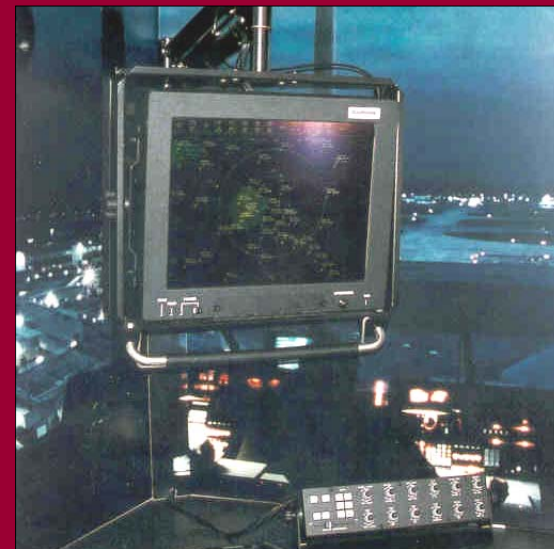
ATB-100s: Making It Work

"ATB-100's are in constant communication with each other.   They share issues that surface and are able to identify commonality among the issues.   The headquarters perspective they provide to the Region and Regional perspective they return to HQ helps to strategize and provide solutions in a more cost effective manner. "

ATB-100s

- ATB-101 ANE
  - Bradley – ETG upgrade
- ATB-102 AEA
  - PHL N90 chokepoint positions
- ATB-103 ASO

- ATB-104 AGL
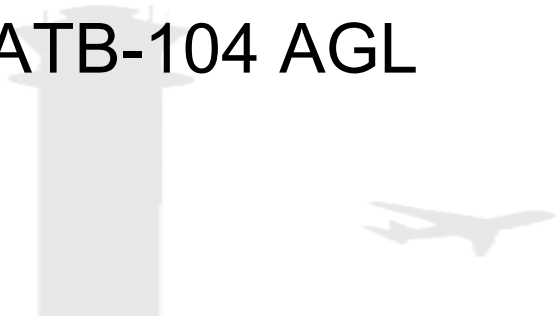
- **ATB-105 ACE**
  - STL EFSTS NCP
  - Gateway SMO CRPDS training
- **ATB-106 ASW**
- **ATB-107 AAL**
  - Incorporating Capstone into terminal environment
- **ATB-108 ANM**
- **ATB-109 AWP**
  - TRACON data collection – Phoenix TRACON

- Kermit Wieselquist, former ATB-101, helped facilitate a solution to a situation at Bradley Airport, Windsor Locks, CT. Bradley is receiving a Standard Terminal Automation Replacement System (STARS) Early Deployment Configuration (EDC). As a result, the Enhanced Target Generator (ETG) lab required adapting to be fully functional for training. The solution was to expand the Enhanced Tower Voice Switching System (ETVS) into the lab, which would also help to make the lab usable as a live position if needed. However, neither the STARS program nor the ETVS program acknowledged a responsibility to sponsor the upgrade. Kermit persuaded the players to look at the problem from a corporate viewpoint. This resulted in a solution where the expansion was able to proceed with funding and equipment.

- ATB-102 Marie Gardiner was pleased to report that PHL and N90 cut over to the newly established chokepoint positions at 0500 on December 27.

- The team spent considerable time the week before tracking down a third Digital Video Mapper to pull it all together and those efforts paid off. Having the third mapper unit on site made it easy to restore a failed component. Marie sent kudos to ATB-30 Dave Smiley and Daren Magness for their support. The NY OSF team developed and successfully incorporated a patch to address a PTR that was identified after cutover. All is running smoothly in the early days of 2002….

- Recently AEA completed phase one of an initiative called chokepoint.   This effort involved activities across many lines of business within AEA.   Flight Procedures, AF, ANI and AT were all major players in this project.   A majority of the work that was involved was halted due to the Moratorium imposed following the September 11 events.   ATB gathered input from all LOBs to assess the impacts to schedule and budget.   It was identified that additional funding would be necessary to support the OT necessary to bring this project back on schedule.   This information was gathered and assessed by one entity rather than each individual line of business.   Resources were identified and secured to bring this project back on track.   Constant coordination of activities between all lines of business helped to identify an equipment deficiency that would have had a significant impact on the operations at the facility upon commissioning had a failure occurred with the PHL primary sensor.   A disconnect between the systems required versus and the capabilities of the systems procured would have rendered the facility with less functionality than they currently have.   Eleventh hour coordination between ATB-102 / ATB-30 / PHL AF and AT provided for a seamless transition of the chokepoint positions into the NAS.   A motor failure occurred this week at PHL and the facility was able to come up on its backup sensor with minimal impact to the operation in the TRACON.

- Through regular coordination among their peers, ATB-100 can identify problems and formulate solutions that have a broader reach.   ATB-100's help to eliminate the application of individual band-aids to problems that were traditionally resolved by individual approaches within a particular Region.   We can now apply solutions that don't have Regional boundaries.   ATB-100s met recently to discuss a problem associated with the lack of equipment/procedures necessary to commission new RWYs with maximum capacity enhancement capability.   As a result of this meeting the 100's are preparing a briefing to highlight a problem that will impact many of our terminal facilities within the next 10 years.   This briefing will be prepared to gain hi level acknowledgment of the issues at hand.   The ultimate goal of the 100's in preparing this briefing is secure support for the development of an action plan.

- Glenn Beaupre', ATB-103, attended the 2002 Regional Administrators Communication Conference in Atlanta, Georgia. This was an opportunity for Regional ATB to address Airport Directors from eighty-six different airports as well as State Aviation Directors from the Southeast. The conference featured leadership sessions with airports divided into four major categories. In each session, ATB had the opportunity to provide a briefing concerning the background and benefits of the ATB organization as well as entertaining numerous questions and hearing concerns from the sponsor organizations. The forum was well received and provided ATB with visibility and a better understanding of needs and priorities within the aviation community.

- Until John Speckin ATB-105, became involved, STL AT, ACE-510 and AOS were having difficulty reaching agreement on an Electronic Flight Strip Transfer System (EFSTS) NCP required for the new TRACON. John was able to elevate the issue to ATB-210 and then bring the parties together via teleconference with ATB-210 and facilitate the resolution of the longstanding issues.

- Gateway SMO, ACE-470, ANI, and others had been working for several months trying to get additional environmental technicians trained on the Critical Redundant Power Distribution System (CRPDS) at the new TRACON. The Regional group was frustrated at the lack of progress. John was able to pull the correct people together in AOS, ATB, and AFZ and facilitate agreement on how this training would be accomplished.

- Has Jerry Jensen made a difference as ATB-107? Jerry worked closely with ANI on what he calls "a couple of hardships." The changing world scenario already fit in Alaska so it was well received. Based on input collected from the divisions in Alaska, Jerry persuaded ATB to look into providing a solution other than STARS for Alaska. He has also been working with the Regional Administrator on strategies to get all of the divisions working toward the same goals and incorporating Capstone into the terminal environment.

- Sally Savage-Lebhart, ATB-109, is working with the other ATB-100s to collect data on TRACON projects. This will give them common ground to compare size and construction costs and to facilitate discussions of the Phoenix TRACON (PHX/P50).

ATB Needs Your Support

- Challenge in 2002 and 2003: the transition of systems that are not now national programs to ATB national-level management.

  - For example, Electronic Flight Strip Transfer Systems (EFSTS – 100 systems), Stand Alone Tower Display System (SATDS – 17 systems), Airport Resource Management Tool (ARMT)

ATB website:
www.faa.gov/ats/atb

Back-up

What's Ahead

- CY2002:
  - ■ EDC-2 to nine additional sites
  - ■ Full STARS-1 at Syracuse and El Paso
  - ■ Full STARS-2 at Philadelphia
  - ■ First U.S. Navy STARS IOC
  - ■ ARTS
    - ◆ Need input here
- CY2003:
  - ■ STARS EDC-2 to two sites
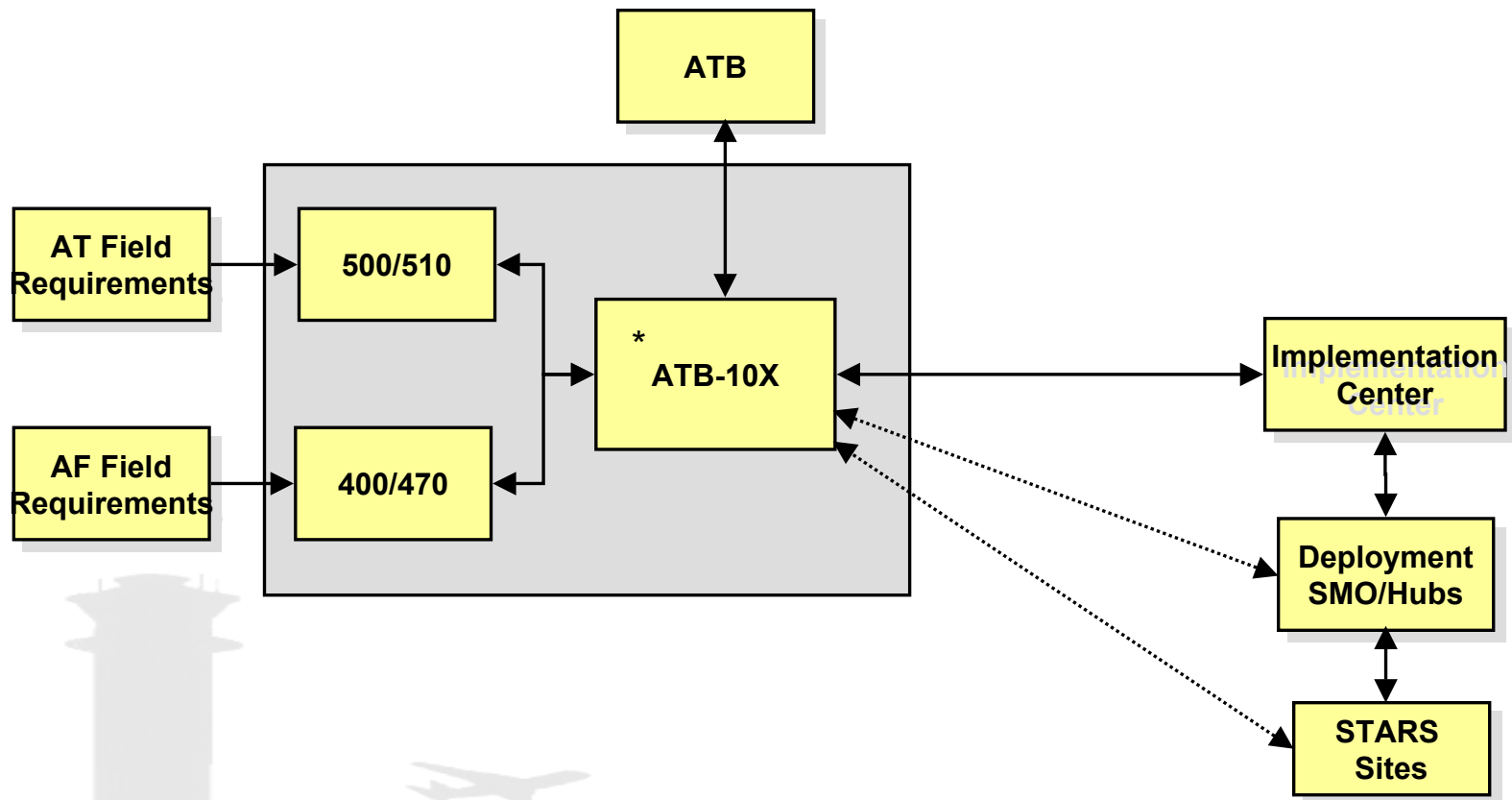
Terminal Regional Requirements Process
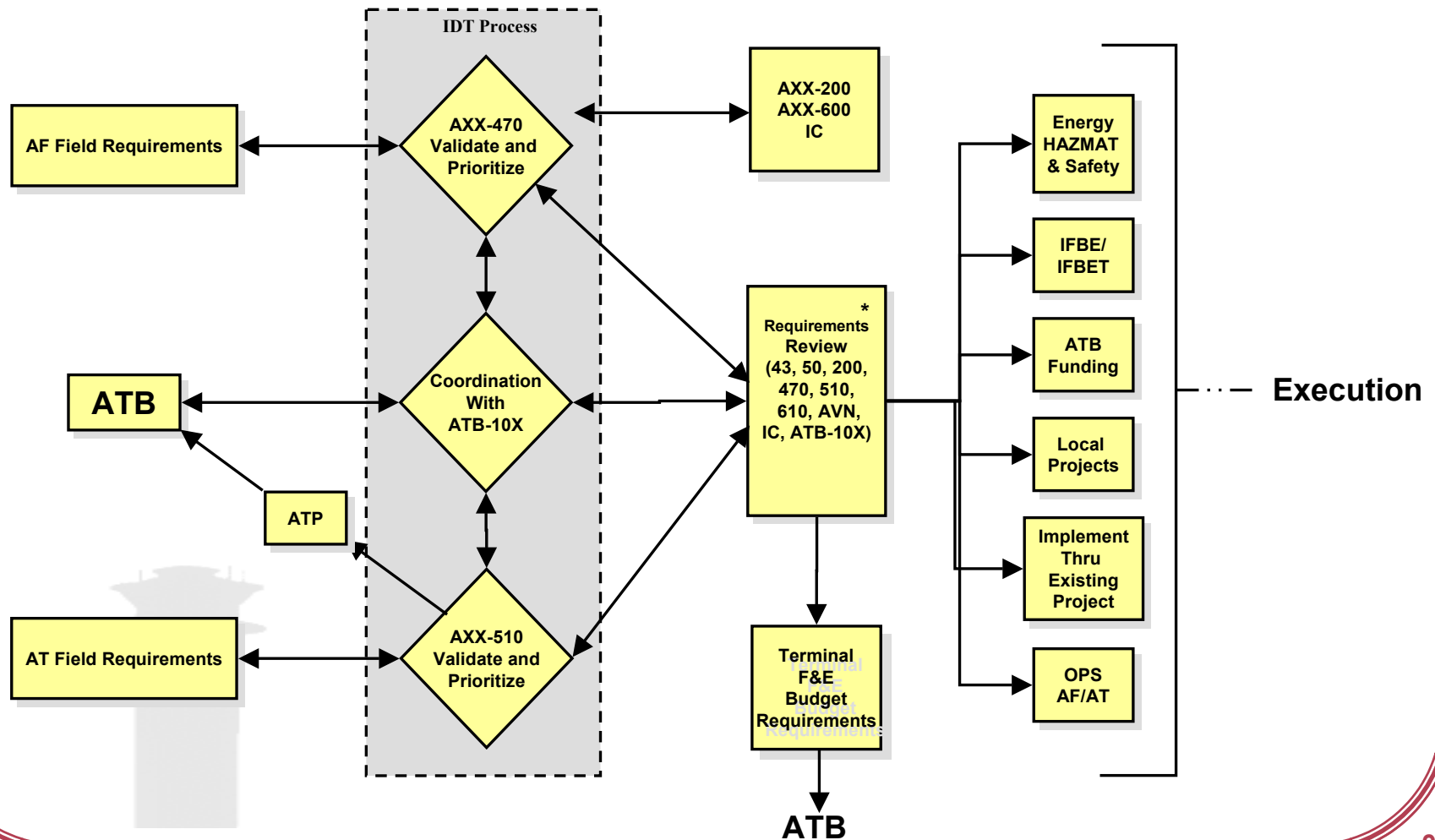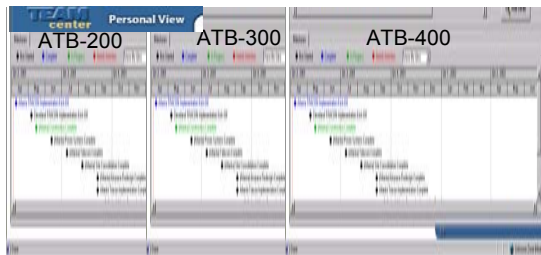
* National SOP (TBD)

SW N 2500.50

SO N 2500

STARS Terminal Implementation Process

ATB

AT Field Requirements

500/510

400/470

AF Field Requirements

*
ATB-10X

Implementation Center

Deployment SMO/Hubs

STARS Sites

* Funding and Waterfall

Schedule Integration: Example
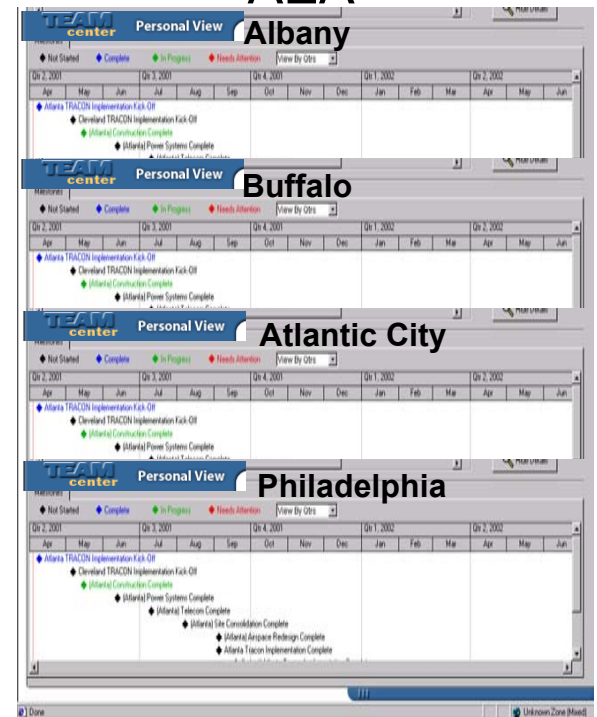

HQ Sector Schedules

ATB-200 ATB-300 ATB-400

AEA

Albany

Buffalo

Atlantic City

Philadelphia

ANI Regional Schedules

Convert to

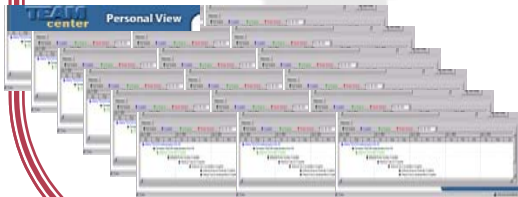RTP Data

Cost and Schedule Integration: Example
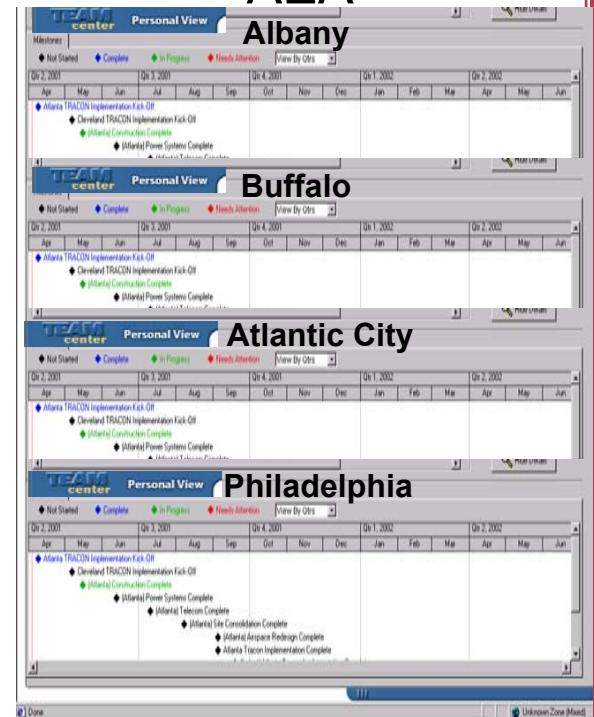
Key Expectations

Before ATB

- Acquisitions separate from operations
- Multiple sources for funding
- Low priority for infrastructure issues
- Multiple decision owners (dispersed accountability)
- Fragmented roles and responsibilities for terminal capabilities
- Separate terminal product lines
- Multiple contacts for terminal projects
- Buildings and structures separate from systems
- Requirements from multiple organizations into various channels

With ATB

→ Acquisitions and operations combined
→ Single source for funding
→ New advocate for infrastructure
→ Focused accountability
→ Centralized lifecycle support for terminal products
→ Combined terminal product lines
→ Single point of contact
→ Buildings, structures, and systems combined in ATB
→ Coordinated and integrated prioritization of requirements

Benefits of ATB

- Acquisition combined with Operations
- Combined budget
- Cradle-to-grave
- National prioritization
- Provide field input to program decisions
- Single point of responsibility/authority
- Prioritization, risk mitigation, and financial management
- Enable core processes

ITWP Activities

- Coordinated effort by planners, schedulers,and stakeholders
  - Develop ITWP process
  - Identify and track high-level milestones against HQ and Regional Terminal Programs
  - Complete pb-ICE training at pb-ICE Team Center
  - Stakeholders and their organizations establish ownership of schedules
    - Aggregate all Work Plan activities and related costs into appropriate FAA WBS categories
    - Place all schedules into one repository in pb-ICE (Livelink)
    - Identify any additional source data required to compliment ITWP development
  - Migrate HQ and RTP schedules into Team Center
  - Develop and baseline integrated terminal master schedule report(s) using Dekker-Trakker to provide ATB management with the various views of information
  - Apply Earned Value and Performance Management reporting against ITWP

ATB Goals: FY02

- Complete STARS FS-2+ OT&E in 4th quarter in preparation for keysite activities and national deployment

- Complete Common ARTS development and testing of Builds 28, 29, and 30 in preparation for keysite activities at A80 Phase 2, NCT, and PCT in accordance with their commissioning schedules

- Implement PBO milestones

- Implement Performance Based Integrated Collaborative Environment (pb-ICE, the ATS standard tool set)

- Complete reprogramming efforts to address security needs in light of current events

Early Achievements

- Integrated planning and prioritization
  - Moving from a project perspective to a service delivery perspective
- Close Regional involvement in the ITWP to balance local concerns against national priorities
- Coordinating to minimize adverse impacts
- Modernization schedule and sequence must be synchronized
- Executive STIs have been developed to execute the milestones in the ITWP

Regional Presence: ATB-100s

- Collect the information used to define the work plan
- Reach agreement on Regional priorities
- Participate in defining national priorities and the work plan
- Ensure the work plan can be executed by the Region
- Execute the work plan
- Provide solutions to unprogrammed requirements
- Provide second-level support for business unit products

What is the Work Plan?

● The Integrated Terminal Work Plan (ITWP) is an integrated plan in a relational database called pb-ICE.

■ Schedules
  ◆ Research
  ◆ Acquisition
  ◆ Deployment
  ◆ Service Life

■ Costs
  ◆ Research, capital, and operations

■ Interdependencies
  ◆ People
  ◆ Systems
  ◆ Support activities

Program Planning Support Capabilities

- Provides cost and schedule integration of all ATB programs
- Aligns Sector and Regional activities with spend plan (FY02 initially)
- Facilitates ATB re-planning efforts
- Supports performance-based business objectives to sustain existing services and deliver new capabilities, consistent with Agency strategy

Work Plans Today

- The current work plan schedules exist principally in three places:
    - HQ Schedules for Terminal Programs inside ATB
    - HQ Schedules for Terminal Programs outside ATB
    - Regional Networks in RTP
- Stakeholders
    - Include ATB, AFZ, ANI, Volpe-Boston

Where We Are

- Early Display Configuration-2 (EDC-2)
  - ARTS IIIA with color displays
  - Operational at El Paso (04/01) and Syracuse (06/01) key sites
  - IOC schedules briefed to Congress
- DoD STARS System
  - Contract award full service system configuration
  - Operational at Eglin Air Force Base key site since 06/00
- Common ARTS
  - Common ARTS Software Releases 27 and 28
    - Includes STL and NCT casefiles, R-ACD and Extended Diagnostics)
  - Power PC hardware installation at PCT and NCT
  - Power PC System test completed
  - MSP commissioned as ARTS IIIE Site

Terminal Facilities Replacement Plan

BACKLOG TAEP → **CONDITION ASSESMENTS** → **CONGRESSIONAL MANATES** → **ADO PROJECTIO** → **SAFETY & SECURTY** →

Regional teams
National priorities
Availability of $

20 yr. future look
Airport Layout Plan
Operational requirements
OEP

Assumptions

- ✓ Establish prioritization schema
- ✓ Steady stream funding
- ✓ Integrated system deliveries considered
- ✓ Roll deferred work into appropriate year
- ✓ Establish baseline for work
- ✓ Rolling plan

Develop Terminal Facilities Replacement Plan